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ABSTRACT

In this phase of the Technological Applications Project (TAP) a study was conducted which sought to determine the information wants of seven groups of individuals who were in a position of decision-making with respect to the adoption of instructional systems (teachers, library specialists, media specialists, curriculum coordinators and subject matter specialists, building administrators, school system administrators, developers). Data were collected about the types of information of highest priority to the majority of the user groups and the differences between user groups with respect to information wants. It was determined that the majority of users did not possess the same information wants. However, the types of information wants that were common to the majority of the groups revolved around three questions: 1) what does the system teach?, 2) how does the system perform with respect to carrying out its objectives?, and 3) how is the system used? (Author/JY)

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INFORMATION WANTS OF SEVEN GROUPS OF USERS CONSIDERING THE ADOPTION OR ADAPTATION OF INSTRUCTIONAL SYSTEMS

Paul A. Twelker, Richard Stockman, and Nancy Shook
Instructional Development Division
United States International University
P.O. Box 1028
Corvallis, Oregon 97330

January 1972

U.S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE

Office of Education
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U. S. DEPARTMENT OF
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FOREWORD

Phase I of the Technological Applications Project is devoted to the design, development, validation and implementation of survey instrumentation capable of providing potential users with useful information about instructional systems. Useful information is a concept everybody agrees to but when an instrument is proposed there is often little agreement as to what is useful to whom for what purpose.

In an effort to get at this problem a conference was held with two consultants, Don Coombs (ERIC at Stanford) and Kenneth Komoski (Educational Products Information Exchange). The suggestion was made that a marketing study be conducted to determine what kinds of information were "actually used in making a decision to purchase a set of instructional materials." From this suggestion the attached study was designed and completed.

It was apparent from the beginning that most educators have an unsatiable curiosity which requires that a distinction be made between information that is "nice to know" and information that must be known to make a reasonable judgment.

The results of this study were used in the construction of the Instructional System Description (ISD) instrument. The information from the ISD will be used to prepare dissemination information as well as a basis for deciding if an instructional system is an instructional system and if TAP should seek an agreement with the developer to include it in the TAP repository operation.

As the TAP dissemination system becomes more operational a similar type of study will be designed to create continuous feedback as to the "usefulness" of information being collected and disseminated. In this way an adaptive-corrective mechanism can be built into TAP which permits the instrumentation to be improved in its efficiency and effectiveness.

Floyd Urbach, Principal Investigator
Technological Applications Project

SUMMARY

Problem

Instruction could be improved at hundreds of institutions if instructional systems in use elsewhere, but not commercially disseminated, could be made available. The objective of the present study was to determine the information wants of seven groups of individuals who are in a decision-making capacity regarding the adoption or adaptation of an instructional system.

Method

Subjects were requested to sort 100 items of information about instructional systems into nine categories representing levels of importance. The 100 items of information were drawn from existing questionnaires, and various reports on instructional materials. The study was conducted with a random sample of educators representing teachers and department chairmen, curriculum coordinators and subject matter specialists, building administrators, school system administrators, media specialists, library specialists, and developers.

Results and Discussion

Means and confidence limits were computed separately from data from each group. Each item of information was then screened so that the resultant listing of information items represented high priority information wants that possessed law variability within each group.

Findings revealed that for the most part, each group wanted different information on instructional systems. Over half of the items that remained from the screening were ranked as important by only one group.

It was found that the three items that were considered as top priority by the majority of the groups involved the instructional objectives of the system, its major goals, and the major concepts taught. Other high priority information wants focused on evaluative outcomes, e.g., student reactions to the system.

Conclusion

The findings of the study provide guidelines for the development of catalogs that provide information on instructional systems, and for surveys or inventories to collect information on instructional systems.

PROBLEM

The Technological Applications Project (TAP) is dedicated to:

1) identifying instructional systems at all levels of instruction, and
2) making instructional systems available.

Many instructional systems are now in development or have been developed that are not commercially disseminated and serve relatively small learner populations. Most instructors cannot search out these systems on their own, due to cost and time considerations. Instruction could be improved at hundreds of institutions if such systems could be made available.

A crucial question is: "What information shall be made available to inquirers about existing instructional systems that will help them make the critical decision to use or not use an instructional system?" Although it is difficult to determine by cursory examination whether or not listings of instructional systems in various reports and catalogs are based on empirically derived information desires of the target audience, there was reason to believe that such data do not exist, at least in the form required for the present project. Yet, for a catalog or listing of instructional systems to be maximally effective, it is critical that this information be known. If a listing of an instructional system contains much irrelevant information or neglects to report relevant information, then the probability of success of improving education would be greatly diminished.

The project identified seven major groups of individuals who were in a position to be of influence in the determination of curriculum change, and who might want access to instructional systems through the nationwide dissemination network:

1) Teachers and Department Chairmen
2) Library Specialists
3) Media Specialists
4) Curriculum Coordinators and Subject Matter Specialists
5) Building Administrators
6) School System Administrators
7) Developers

There was little reason to believe that these groups possess the same information wants, but information that would allow a comparison between these groups was unavailable to the project. The implication here is that if information wants differed markedly for each group, then the way in which information was stored for future retrieval would have to be taken into account. For example, diverse information

needs might indicate separate catalogs for particular user groups, or a search-and-access system that was designed to take into account different user information wants.

RESEARCH OBJECTIVE

The objective of the present research was to determine the information wants of seven groups of individuals who might want access to instructional systems through a nationwide repository. A distinction is made here between information wants and information needs. Information wants are those things that the user reports as important for him to know when selecting an instructional system. On the other hand, information needs are those things that are determined empirically as necessary to know when making decisions about the selection of an instructional system. The present research concerned itself only with assessing information wants as reported by the seven groups.

METHODS

The method that was adopted to achieve the research objective utilized a survey that asked representatives from the seven groups to sort the various items of information about an instructional system into nine categories representing levels of priority or importance.

The types of information were stated in the form of questions about an instructional system. For example,

What are the general goals of instruction of the system?
What are the major concepts taught by the system?
How much time is spent by teachers in direct student contact?

It was believed that the items of information, stated in this way, would be more familiar to subjects, and would facilitate the sorting.

Determination of Items of Information about Instructional Systems

The first task addressed in initiating the study was to generate items of information that described characteristics of an instructional system. The question was asked, "If an individual were considering the adoption or adaptation of an instructional system, what information might he wish to have that would facilitate his decision-making?" Fortunately, there were several sources of information at hand. The Social Studies Education Consortium (SSEC) already had developed a "Curriculum Materials Analysis" that listed many questions

about a Social Studies curriculum unit. Each of these questions could be conceived of as an item of information about an instructional system in general. Another group, the Educational Products Information Exchange (EPIE), regularly publishes reports about instructional materials. An examination of their reports provided many clues to questions to ask about instructional systems. Finally, an independent brainstorming by the TAP staff, using the six SSEC major categories[1] as a starting point, provided yet another source of items of information about systems.

These items of information were then submitted to the TAP staff for examination and revision on two occasions. The items were examined in light of four criteria:

1) pertinence to instructional systems;
2) redundancy to other items;
3) clarity of wording;
4) consistency of phraseology.

The items of information, which originally numbered well over 150, were narrowed down to an even 100 items.

Finally, the items were field tested with nine individuals to determine the adequacy and clarity of the statements. Numerous revisions were made on the basis of these data.

Selection of the Sample

In a recent study by Edling and Buck (1969) on the information needs of teachers, administrators, and school board members in urban, suburban, large rural, and small rural school districts with respect to programs of individualized instruction, it was found that the needs of the Oregon educator sample were representative of those found nationwide. On the basis of this study, it was decided that educators in the State of Oregon would serve as the population from which the sample for the study would be drawn.

In determining the specific individuals to receive the survey, (with the exception of developers), the table of random numbers was applied to the individual listing of district and public school personnel shown in the 1970-1971 Oregon School Directory. The list of developers was compiled by random selection from a list of instructional system developers associated with the Education Coordinating Council Consortium of the State of Oregon. Twenty names were randomly selected in

[1] Descriptive Characteristics of a System, Rationale and Objectives, Antecedent Conditions, Content, Instructional Theory and Teaching Strategies, and Overall Evaluation and Judgments.

each of the seven groups.

Experimental Procedures

Each subject was sent a packet of information and experimental materials that included the following:

1) a cover letter explaining the nature of the request for assistance, the nature of the Technological Applications Project, and the nature of the survey;
2) procedures for the rank-sorting of the survey items;
3) a list of contemporary books from which the subject could select one--compliments of TAP as a token of appreciation for completing the survey;
4) a TAP brochure explaining the purposes of the project
5) 100 3" X 5" cards carrying a single item of information
6) nine envelopes with titles showing level of importance--for ease of returning the sorted and ranked items of information;
7) a stamped, return envelope.

The first four items mentioned above are found in Appendices A through D. The list of items of information about instructional systems is found in Appendix E.

The task which was given to Ss involved two successive sortings of the cards. After becoming familiar with the items by a cursory examination of the cards, Ss were asked to first sort the cards into three approximately equal piles labeled "important", "neutral", and "unimportant". Ss were asked to use a frame of reference that represented their role in education (i.e., teacher, developer, etc.). Ss were then requested to sort each of the three stacks of cards from the initial sorting into three new stacks, making a total of nine stacks at the end of the sorting.

In order to insure that the card sort procedures would be properly understood and followed, a field test of the instructions was conducted prior to their use. The sample consisted of six persons involved in the field of education. They were instructed to follow the directions provided with no help from the experimenter, and to critique the procedures. All Ss performed the sortings with no difficulty, and offered no suggestions for change of the instructions.

Approximately ten days after the mailing of the survey to Ss, a telephone follow-up was initiated. All Ss who had not returned data were contacted and asked to complete the survey promptly. A second follow-up was initiated approximately ten days after the first, again by telephone. Attempts at further follow-up were cur-

tailed due to time constraints of the project. The number of respondents returning valid data from each of the seven groups is shown below:

1)	Teachers and Department Chairmen	11
2)	Library Specialists	9
3)	Media Specialists	15
4)	Curriculum Coordinators and Subject Matter Specialists	14
5)	Building Administrators	8
6)	School System Administrators	13
7)	Developers	8

The number of valid returns totaled 78. Each S which returned data was sent a paperback edition of his selection and an accompanying "thank you" letter (see Appendix F). Also included was a copy of a letter requesting their cooperation in helping to identify developers of instructional systems in all areas. This letter was accompanied by a form on which they could respond with names and addresses of developers as well as individuals who might know of developers. These materials are found in Appendix G.

RESULTS AND DISCUSSION

Analysis of the Data

Data from each group were handled separately. Means were computed for each of the 100 items of information and are shown in Appendix H. In addition, confidence limits were established with the confidence coefficient being established at the .90 level.

In handling these data, it was deemed important that each group have a fair and approximately equal representation in the final listing of high-priority items of information. To this end, the first screening of items was accomplished by discarding the fifty items that ranked lowest within each group. Then, from those items remaining for each group, one half were discarded that possessed the highest range of variability. The total number of different items that were compiled as a result of this screening was 57. These items represented high priority items for each group that possessed low variability within each group.

The composite listing of 57 items was considered excessive in terms of the feasibility of collecting that much information about an instructional system through a developer-provided description. Therefore, further screening was accomplished in the same manner as described above. Only this time, 40 of the top 100 items were retained from each group, and screening on the basis of variability was done in such a way that only about 15 items per group were retained. These items are listed in Appendix I. This composite listing totaled 45 items.

Discussion

An examination of the 45 high-priority items listed in Appendix I reveals some rather interesting findings. To say that each group wanted different information on instruction systems being considered for adoption or adaptation is an understatement. Consider the following information:

Number of Groups in Agreement on Priority of an Individual Item	Number of Items
7	1
6	2
5	3
4	4
3	5
2	7
1	23

There were more items of information that were ranked as high priority by only one group than there were items of information agreed upon by only two or more groups. To put it another way, over half of the items that remained after the screening were ranked as important by only one group. The research confirmed the notion suspected by the TAP staff that the seven groups surveyed in the research do not possess the same information wants. The implication for efforts such as TAP where information on instructional systems must be provided to users is that one catalog listing hardly suffices for all users unless one accepts about a 50 per cent "irrelevancy ratio" for the information listed for any one group using the catalog. It would seem that a distinct alternative would be the printing of different catalogs for each user group if funds were available. However, an unfortunate situation exists in that even if separate catalogs were pub-

lished, the securing of the information from the developer is immensely more complex because of lack of congruence between the groups. Instead of only 20 or 25 items of information being collected about an instructional system from the developer, 45 items of information must be collected, and half of those items only satisfy the curiosity of one of seven user groups.

Incidently, if one were tempted to ask the question, "If I could only satisfy the information wants of one of the seven groups, which group, on the average, shows the most agreement with the other groups?", the answer is that the curriculum specialist lists as top priority more items in common with other groups than any other group of educators. A close second to the curriculum specialist is the system administrator. The group that, on the average, lists the least number of top priority items in common with other groups is the library specialist.

The second thing which is of interest is the type of information that is considered as top priority by the majority of the groups. The three items that were considered as top priority by the majority of the groups involved:

Specific instructional objectives of the system
General goals of the system
Major concepts taught

It is not difficult to classify each of these items of information under the heading, "What does the system teach?" The next four items that are considered as top priority by the majority of the groups were:

Match between the instructional strategy and objectives of instruction
Credibility and relevance of content
Student reactions to the system
Consistency of student performance

The next two items that were considered as top priority by the majority of the groups were:

Provision for individual student pacing
Prerequisite knowledges/skills required by teacher

The first item has to do with instructional strategy while the second item has to do with ease of use of the instructional system. But it is probably safe to say that on the minds of most users of instructional systems are two important questions involving what a system teaches and how it accomplishes it. With this in mind, it would not be too unreasonable to suggest that a catalog listing of information on instructional systems include these items of information as their first entries.

CONCLUSION

The objective of the research was to determine the information wants of seven groups of individuals who were in a position of decision-making with respect to the adoption of adaptation of instructional systems. Data were collected that shed light on two important factors related to the provision of information about instructional systems to potential users: 1) the types of information of highest priority to the majority of user groups, and 2) the differences between user groups with respect to information wants. It was determined that the majority of users did not possess the same information wants. However, the types of information wants that were common to the majority of the groups involved three areas: 1) what does the system teach?, 2) how does the system perform with respect to carrying out its objectives?, and 3) how is the system used? It was suggested that any catalog that lists information on instructional systems consider ordering the information presented in light of the prioritees determined in the study.

REFERENCES

Edling, Jack V. and Buck, James E., An Interpretive Study of Individualized Instructional Programs. Teaching Research Division, Oregon State System of Higher Education, Monmouth, Oregon. 1969.

Knight, Merle M. et. al., Curriculum Materials Analysis System, Long Form, Boulder, Colorado: Social Science Education Consortium (Publication #143), May 1971.

Oregon Board of Education. 1970-71 Oregon School Directory, Oregon Board of Education, Salem, Oregon, 1971.

Appendix A

Cover Letter

TECHNOLOGICAL APPLICATIONS PROJECT

Functioning to catalogue instructional systems and to establish a national dissemination network.

P. O. Box 1023 Corvallis, Oregon 97330

September 22, 1971

MEMO TO: Selected Educators in Oregon

FROM: Floyd Urbach, Director
Technological Applications Project

The following request is to ask for your help on a national project designed to locate instructional systems and to prepare catalogs of instructional systems at all levels of education. The urgent need for such an activity is apparent. A large number of teachers are now engaged in creating instructional systems which have wider application than their own local school.

The Technological Applications Project is designed to gather information about existing instructional systems and make it available to educational agencies throughout the United States. In order to determine what kinds of information are useful to those who decide on how funds will be spent, we are attempting to find out what information is used or would be used (if available) to help make the critical decision to use or not use a particular set of materials; i.e., a system of instruction.

Your name was selected by use of a table of random numbers applied to the 1970-71 Oregon School Directory. The random technique of selection was used to insure that a comprehensive sampling was obtained for this part of our study. If you agree to participate, it will take about one hour of your time. The task is to sort 100 cards related to what information you would like to have before selecting a set of instructional materials.

In return we would like to provide a token of our appreciation of your cooperation in the form of a contemporary book. In the packet of enclosed materials is a checklist to indicate your preference. Upon receiving your completed set of cards, your book selection will be forwarded.

Thank you for your consideration. We hope you will decide to become a part of this undertaking to provide better instruction to the students in American schools.

Enclosures: TAP brochure
Instructions for card sorting
100 cards
9-#6 3/4 envelopes
9"x12" stamped return envelope
Book selection list

The Technological Applications Project is funded by a grant from the Bureau of Libraries and Educational Technology, United States Office of Education, Department of Health, Education and Welfare.

Appendix B.

Procedures for Rank-sorting of the Survey Items

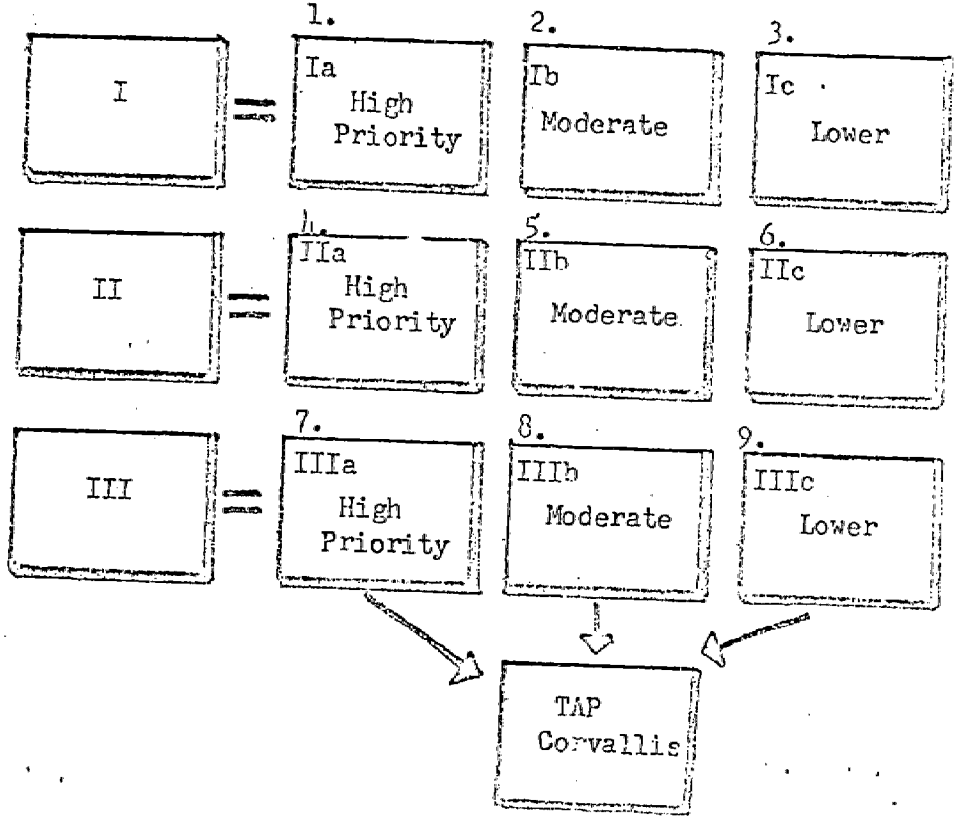
Step 1 Flip through the deck to become familiar with the items.
As per the following directions, two sorts will be required, resulting in nine categories.

Step 2 First Sort--Using a frame of reference that essentially states, "As a _____, (your role as an educator) I consider this information of I-IMPORTANCE, II-NEUTRAL IMPORTANCE, III-UNIMPORTANT," sort the items into three approximately equivalent piles.

Step 3 Using the same basic frame of reference, rank each of the three stacks from the initial sorting into three new stacks.

Step 4 Place each of the nine piles in their respective envelopes.

Step 5 Return the materials in the stamped, self-addressed envelope to:
TAP
P.O. Box 1028
Corvallis, Oregon 97330



Appendix C.

Listing of Complimentary Book Titles

SELECTED READING

Following is a selected list of contemporary books from which to choose as a result of your participation in our instrument development survey. Please mark your choice by placing a check (√) in the space preceding the title of your preference. Print your name and mailing address in the spaces provided and return this sheet in the large envelope with the ranked cards.

☐ If Teachers Were Free, by Richard Renfield
"...fresh, original, immensely provocative."
--Leo Rosten, Look

☐ Future Shock, by Alvin Toffler
"Future Shock will intrigue, provoke, frighten, encourage and above all, change everyone who reads it."
--Best Seller

☐ Crises in the Classroom, by Charles E. Silberman
"The most widely and earnestly reviewed book on education in years... Crises in the Classroom is a sane, responsible work of reportage."
--Benjamin DeMott, Life

☐ The Peter Principle, by Dr. Lawrence J. Peter and Raymond Hull
"The Peter Principle has struck a throbbing public nerve...a minor cultural phenomena and its title phrase, like Parkinson's Law, is certain to enter the language."
--Life

☐ Analyzing Performance Problems, by Robert F. Mager and Peter Pipe
A basic systems approach to solving performance problems.

☐ The Medium is the Massage, by Marshall McLuhan
A look around to see what's happening...and why.

☐ Up the Organization, by Robert Townsend
"The sagest (and even most outrageous book ever) written about how business should be run."
--Harper's

_____
(NAME)

_____
(ADDRESS)

_____
(ZIP)

Appendix D.

TAP Brochure

TECHNOLOGICAL APPLICATIONS PROJECT

Functioning to catalogue instructional systems, and to establish a national dissemination network.

P. O. Box 1028 Corvallis, Oregon 97330

WHAT

The Technological Applications Project (TAP) is dedicated to:

- IDENTIFYING INSTRUCTIONAL SYSTEMS AT ALL LEVELS OF EDUCATION
- MAKING INSTRUCTIONAL SYSTEMS AVAILABLE

An instructional system may be taken to mean materials that are systematically developed and evaluated, usually taking the form of packages or modules of instruction. They may include some commercial materials integrated with one's own materials.

WHY

Many instructional systems are now in development or have been developed which are not commercially disseminated and serve relatively small learner populations. Most instructors cannot search out these systems on their own, due to cost and time considerations. Instruction could be improved at hundreds of institutions immediately if such systems could be made available.

HOW

Phase I: Nationwide Survey and Cataloging: To Determine

- What is being done?
- Where is it being done?
- How effective have the developers found the system to be?
- Is the system available for use by others?

Phase II: Nationwide Exchange: To Determine

- What alternatives exist to establish a nationwide exchange?
- Where might such a nationwide exchange (or network of exchanges) be located?
- How could such a nationwide exchange operate?
- Is a nationwide exchange feasible and desirable?

BUT...

Who holds the proprietary rights?

- TAP does not seek proprietary holdings...only rights for duplication and dissemination.

What if the developer finds a commercial outlet?

- TAP duplication/distribution contracts are revocable by the developer.

What's in it for the developer?

- Developer remuneration is negotiated on the basis of the developer's assessment of his materials.

WHO

Who can I write for further information?

- Floyd Urbach, Project Director
- Paul Twelker, Phase I Director
- Frank Nelson, Phase II Director

The Technological Applications Project is funded by a grant from the Bureau of Libraries and Educational Technology, United States Office of Education, Department of Health, Education and Welfare.

Appendix E.

Listing of Items of Information on Instructional Systems

1. What were the influential characteristics of the community which placed constraints upon the developers?

2. Does the system require regular parent-teacher interaction?

3. What skills are required of teachers using the system?

4. Are intended outcomes of system related to students' interests?

5. What was the length of time it took to develop the system?

6. Can PARTS of the system be acquired or only the total system?

7. What are the components of the system?

8. Were any particular constraints placed upon the developer?

9. For what student achievement level is the program intended?

10. How much direction is required of the teacher?

11. Does the system require regular community-school interaction?

12. Does the system require regular teacher-teacher interaction?

13. How much teacher time is spent in evaluating student performance?

14. For what specific audience is the system intended?

15. What are the general goals of instruction of the system?

16. What is the primary way in which instruction takes place?

17. Does system teach material ordinarily taught by teacher?

18. Is the system designed to facilitate supplemental teacher input?

19. Does the system provide for student evaluation/feedback for revision of the system?

20. Can parts of system be taught separately?

21. Is there a teachers' guide?

22. What are the student reactions to the system?

23. What will students know, feel or be able to do after completing the system?

24. Can students proceed at their own pace?

25. What amount of teacher in-service time is necessary for competence in the use of the system and its components?

26. What are the expressed attitudes of teachers who have used the system?

27. How much time does the student spend in self-evaluation?

28. Does equipment to use the system need to be checked out by the student?

29. What kinds of facilities are required immediately and in the future to operate the system?

30. What kinds of basic financial support are required immediately and in the future to operate the system?

31. How does the producer recommend the system be used?

32. Is a report of system user comments available?

33. Does system instruction "tie in" to pre- and post-system instruction?

34. Is the system useful as it now exists in its present school setting?

35. What amount of time does the teacher spend in replacing expendables?

36. What prior level of learning is needed to get into the system?

37. Are there any problems in using the system's materials?

38. How many user groups have adopted or adapted the system since its completion?

39. How many teachers were involved in the development effort?

40. Does student need previous experience with systems materials in order to perform?

41. What is the history of the development of the system?

42. What are the instructional strategies involved in the system?

43. How does the student work with the materials?

44. What is the educational philosophy of the developers?

45. Does the system promote student interactions? If so, how?

46. What subject matter content is covered by the system?

47. What is the size of the institution where the system was developed?

48. What type of funding was used to develop the system?

49. Are learning activities specified in the system?

50. What are the parents' reactions of students who are involved with the system?

51. Does the system influence non-users in the same setting?

52. What is the cost to support the system from year to year for non-consumable items?

53. Does system teach content that is ordinarily not readily taught by teachers?

54. Where can the system be obtained?

55. Has there been any community reaction to using this particular system?

56. Can the system be used for other student groups than was originally intended?

57. Is homogeneous student grouping for learning required?

58. Does the student system user need to be a good reader?

59. What is the title of the instructional system?

60. Is there a consistency of student performance when used time and again?

61. What does it cost to support the system from year to year in terms of maintenance?

62. Are any special people other than the teachers needed to operate the system?

63. Have school administrators' attitudes generally been favorable about the system?

64. Do participants' goals or aspiration change using the system?

65. What are the specific instructional objectives of the system?

66. What is the cost per student per year to operate the system?

67. What problem or interest prompted the development of the system?

68. Is the system particularly adapted to certain types of institutions?

69. Does the system free the teacher for other planning of other instructional activities?

70. Is the content of the system credible and relevant?

71. What measurement techniques are used to evaluate student progress?

72. For what intellectual level is the system intended?

73. What is the educational background of the most successful teachers using the system?

74. Were data collected to determine if the system was needed or desirable?

75. What are the major concepts taught by the system?

76. How flexible is the system in adapting to other school settings?

77. What knowledges and skills are required of a teacher in order to use instructional systems?

78. What does it cost to duplicate the system for adaptation?

79. What is the estimated time required for delivery?

80. How well does the instructional strategy match the objectives of instruction?

81. Is the system directed toward a specific cultural group?

82. Does system teach content ordinarily considered difficult to learn?

83. How much time is required to repair or maintain equipment used for the system?

84. What is the cost to support the system from year to year for facilities and storage?

85. What is the rationale for the stated goals and objectives?

86. How long does it take most students to successfully work through the system?

87. What are the author's views of affective or emotional content of the system?

88. Is there any classroom observation or data which indicate how long and to what extent the system is used?

89. Are there any ill-desired effects on students from using the system?

90. Does the system require special physical facilities?

91. Is the system partially useful for ONLY a particular community?

92. What are the dominant theory(ies) of learning that guided the development of the system?

93. Does the system require regular administrator-teacher interaction?

94. Is the system designed in such a manner that students with particular abilities or disabilities should not use the system?

95. Does the system require a particular kind of encounter between the teacher and the student?

96. What equipment needs to be installed in order to be able to use the system?

97. What amount of time does the teacher spend getting instructional material ready?

98. What procedures were used in the over-all evaluation of the system?

99. What is the cost to support the system from year to year for consumable items?

100. How much time is spent by teachers in direct student contact?

Appendix F.

Follow-up "Thank-You" Letter

TECHNOLOGICAL APPLICATIONS PROJECT

Functioning to catalogue instructional systems
and to establish a national dissemination network.
P. O. Box 1028 Corvallis, Oregon 97330
(503) 753-1671

M E M O R A N D U M

TO: TAP Project Participants

FROM: Floyd Urbach, Director - Technological Applications Project

DATE: November 10, 1971

Your cooperation and assistance in the development of our survey instrument is appreciated. And we are pleased to deliver your book selection to you at this time.

You were among the first 75 to return the cards to us. The information is now being prepared for analysis to determine what is critical to include in our catalogues this spring. We have also enclosed TAP's Keyman search information for your consideration.

Again, thank you for your help. You will hear more about TAP in the near future.

The Technological Applications Project is funded by a grant from the Bureau of Libraries and Educational Technology, United States Office of Education, Department of Health, Education and Welfare

Appendix G.

Keyman Letter and Survey Form

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
OFFICE OF EDUCATION
BUREAU OF LIBRARIES AND EDUCATIONAL TECHNOLOGY
WASHINGTON, D. C. 20202

July 29, 1971

The Office of Education has contracted with the Instructional Development Division of United States International University to engage in a nationwide search for instructional systems (materials systematically developed and evaluated, usually taking the form of packages or modules of instruction). Because of your experience and your position, we think you may be able to help locate existing systems and persons involved in developing such forms of instruction.

Our eventual goal is to establish a national dissemination network to give greater visibility and access to instructional systems, especially those that are not commercially disseminated. At the same time, such a network will provide educators with reliable data not now readily available, for the purpose of adopting or adapting instructional systems.

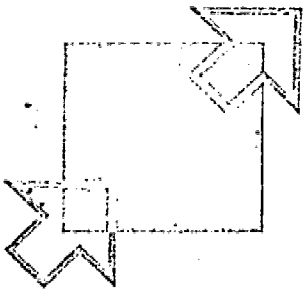
You can help the project get started by taking a few minutes to jot down the names of persons who are or might be involved in such development efforts. Would you please complete the enclosed form and return it at your earliest convenience in the envelope provided. If you are not in a position to help locate such persons, please check the appropriate box on the form and return it anyway. This will insure that you will not be contacted again.

Thank you for your assistance.

Sincerely yours,

Burton E. Lamkin
Associate Commissioner

Enclosure



TECHNOLOGICAL APPLICATIONS PROJECT

Functioning to catalogue instructional systems and to establish a national dissemination network.
P. O. Box 1028 Corvallis, Oregon 97330
(503) 753-1671

OE No. 3169
OMB No. 51-RO923
Expiration date June 30, 1972

Name: _____

Position: _____

Address: _____

_____

The following persons are developers of instructional systems:

Name: _____ Name: _____

Address: _____ Address: _____

_____ _____

Name: _____ Name: _____

Address: _____ Address: _____

_____ _____

The following persons will be able to help identify additional developers of instructional systems.

Name: _____ Name: _____

Address: _____ Address: _____

_____ _____

☐ Sorry, I am not in a position to help locate the persons you seek.

Please return in the enclosed return address envelope.

The Technological Applications Project is funded by a grant from the Bureau of Libraries and Educational Technology, United States Office of Education, Department of Health, Education and Welfare.

Appendix H.

Mean Priority Rankings for Each Item of Information for Each User Group

Item No.	Group 1	2	3	4	5	6	7
1	6.55	5.89	5.40	5.50	4.67	5.77	5.75
2	5.00	3.56	4.27	4.36	2.00	4.15	6.63
3	2.55	3.33	3.07	1.86	3.00	2.15	2.38
4	2.91	2.67	1.47	1.93	1.50	2.08	2.38
5	7.73	7.22	7.33	8.21	6.67	7.46	8.63
6	4.27	2.44	3.73	3.50	3.33	3.69	3.13
7	3.36	4.11	3.33	4.43	2.50	3.08	2.88
8	7.73	4.89	5.00	6.21	5.83	6.92	6.50
9	3.09	3.56	3.07	2.00	2.17	2.85	3.25
10	3.36	3.22	3.00	2.29	2.83	2.75	2.88
11	4.82	4.00	4.53	4.14	3.00	4.85	6.00
12	4.91	3.11	4.73	3.71	3.00	4.00	4.13
13	3.73	2.56	4.13	2.71	2.17	2.08	4.00
14	3.55	3.00	3.00	3.36	3.50	2.92	3.00
15	1.64	1.44	2.20	1.21	1.50	1.69	2.13
16	4.00	3.22	2.60	2.79	3.00	2.62	2.13
17	4.91	2.89	4.53	4.14	4.33	4.77	4.13
18	3.82	3.33	2.87	4.00	4.67	4.08	4.38
19	3.55	2.22	2.20	3.14	3.17	2.15	2.63
20	3.45	3.00	3.67	3.64	3.83	4.31	3.38
21	3.18	2.56	3.07	3.21	2.50	4.23	5.50
22	2.25	2.22	2.20	2.21	2.67	2.46	2.88
23	2.55	2.56	1.47	1.57	1.33	2.38	2.75
24	1.45	2.78	1.73	2.36	2.50	2.08	2.75
25	3.45	1.89	3.93	2.79	2.50	2.00	4.50
26	3.27	3.33	3.80	2.71	3.50	2.92	4.88
27	4.45	4.22	4.13	3.79	4.67	3.54	4.88
28	7.27	5.67	5.67	6.93	7.00	6.62	6.50
29	3.00	1.78	2.27	1.93	3.33	2.54	4.13
30	2.27	1.89	2.40	2.07	3.17	2.62	4.38
31	3.91	3.44	4.67	5.07	3.33	4.46	5.63
32	5.27	4.44	5.53	4.50	5.50	5.46	5.00
33	3.36	2.11	3.80	4.00	3.33	3.54	4.88
34	3.55	2.78	4.07	3.71	2.83	3.00	6.25
35	6.27	3.56	4.73	5.07	6.50	5.69	6.38
36	3.09	3.11	3.73	4.21	4.17	3.23	4.25
37	2.73	2.56	3.87	3.57	3.50	4.15	3.75
38	6.18	6.33	6.00	7.14	4.83	6.38	6.38
39	5.91	6.20	6.20	7.21	5.33	5.54	7.25
40	4.27	4.11	5.53	5.00	5.00	4.15	4.75
41	7.09	6.89	6.80	7.50	5.83	7.15	6.63
42	3.64	2.67	2.80	2.71	2.33	2.31	3.63
43	3.36	3.89	3.27	2.57	2.67	2.85	3.00
44	6.55	3.22	4.87	4.50	2.50	3.69	4.75
45	2.91	2.89	3.07	2.93	3.17	2.46	2.75
46	2.64	2.56	2.33	2.14	2.00	3.00	2.75
47	7.55	6.67	8.00	8.00	6.50	7.85	8.13
48	7.45	7.89	7.80	8.36	6.83	8.23	8.38
49	2.73	2.78	3.60	1.79	1.67	2.85	3.25

50	3.82	3.22	3.60	4.36	2.67	3.58	6.67
51	5.18	5.11	5.73	5.57	4.17	5.08	6.63
52	4.00	2.22	3.13	3.21	4.50	2.69	5.00
53	3.45	4.67	3.13	3.29	3.83	3.77	4.38
54	3.82	4.00	4.87	4.57	4.67	3.62	4.25
55	4.27	5.00	4.87	4.36	3.50	4.08	6.13
56	4.91	3.67	3.47	4.57	4.33	4.08	6.25
57	4.18	4.11	5.73	4.57	4.17	3.62	4.75
58	2.00	3.00	1.80	2.36	3.17	2.23	3.38
59	7.73	5.73	6.29	6.00	7.17	6.31	6.63
60	2.55	2.11	2.67	2.14	2.00	1.92	4.50
61	3.91	2.22	3.07	3.43	5.00	2.69	5.00
62	2.91	2.67	2.93	2.43	3.67	2.62	4.13
63	4.82	3.78	4.67	4.50	2.67	4.69	7.88
64	2.82	2.67	1.87	2.71	2.50	3.00	3.00
65	1.82	1.00	1.87	1.29	1.50	1.23	2.00
66	3.82	2.00	2.93	2.64	3.50	2.15	4.63
67	5.73	4.67	5.40	6.21	3.83	5.85	7.38
68	4.55	4.78	5.53	6.21	5.83	6.00	6.63
69	4.82	3.11	3.87	3.00	4.67	4.54	3.63
70	1.55	2.22	1.87	1.50	2.00	2.62	2.75
71	2.45	2.33	2.80	2.29	2.67	1.69	3.13
72	2.64	3.44	4.53	2.57	3.17	3.92	4.00
73	6.55	6.22	7.60	5.64	6.17	6.46	5.63
74	4.82	3.44	4.53	4.79	4.50	3.00	5.38
75	1.55	1.00	2.20	1.50	2.00	1.31	1.50
76	3.27	3.44	3.60	4.36	4.33	3.77	6.00
77	2.82	2.22	3.00	2.07	3.83	1.92	2.13
78	5.09	3.00	4.27	4.79	5.33	4.00	5.88
79	6.91	5.11	6.13	6.29	6.00	5.85	7.13
80	1.91	1.22	2.00	1.50	2.00	1.54	3.00
81	5.00	5.22	4.73	5.00	7.33	5.62	5.00
82	4.45	2.89	4.27	4.50	4.50	4.38	4.63
83	5.64	2.67	4.13	4.64	5.67	4.08	5.63
84	5.45	2.22	3.13	4.00	5.00	3.23	5.50
85	3.82	1.44	3.80	3.29	3.17	2.46	3.50
86	3.73	3.89	4.87	3.00	3.50	2.69	4.13
87	6.00	4.78	5.07	7.29	5.67	5.54	5.88
88	4.55	4.67	4.27	5.29	4.50	4.08	6.13
89	1.64	2.00	1.53	2.14	3.00	1.46	2.50
90	3.64	2.44	2.87	2.71	4.17	2.69	4.13
91	5.27	4.67	4.00	5.64	6.50	5.31	5.75
92	3.73	3.56	4.47	3.79	4.83	2.38	3.75
93	4.55	3.22	4.87	3.86	3.67	4.00	6.25
94	3.64	2.56	2.93	4.14	4.17	3.69	4.75
95	2.91	2.22	2.80	2.71	2.33	3.62	3.00
96	3.73	1.67	2.40	3.07	3.50	3.00	4.50
97	3.18	1.89	3.60	3.21	3.00	3.08	3.38
98	3.82	2.44	2.93	3.93	4.00	2.69	3.88
99	4.27	2.44	3.07	3.43	3.50	2.77	4.63
100	3.36	1.89	2.60	2.50	2.83	2.38	2.75

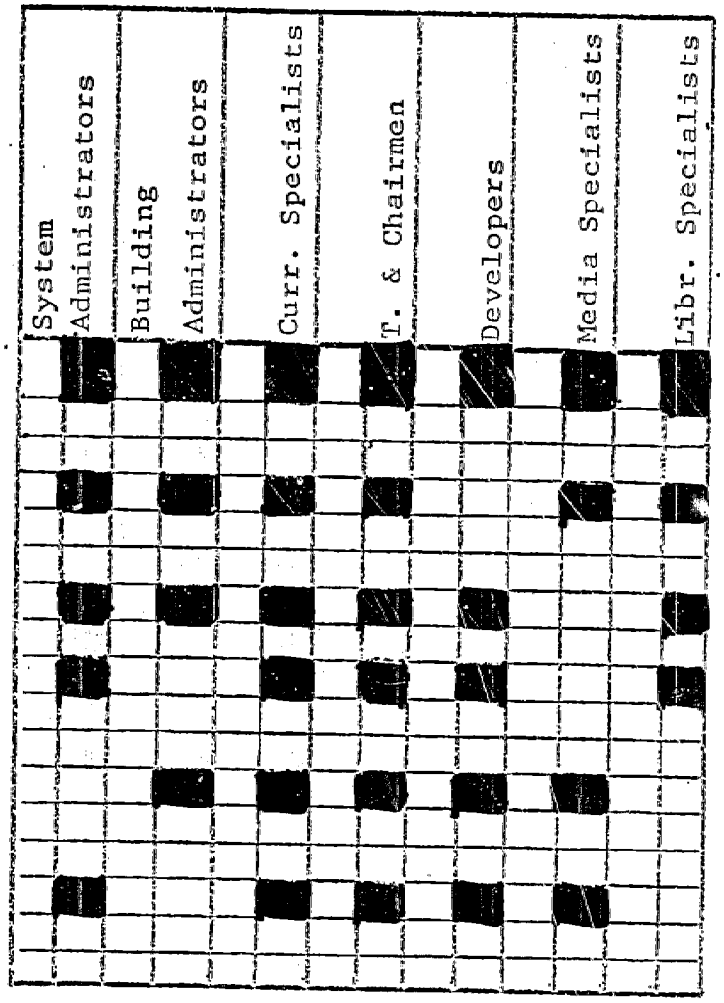
Group Key

1. Teachers and Department Chairmen
2. Library Specialists
3. Media Specialists
4. Curriculum Coordinators and Subject Matter Specialists
5. Building Administrators
6. School System Administrators
7. Developers

Appendix I.

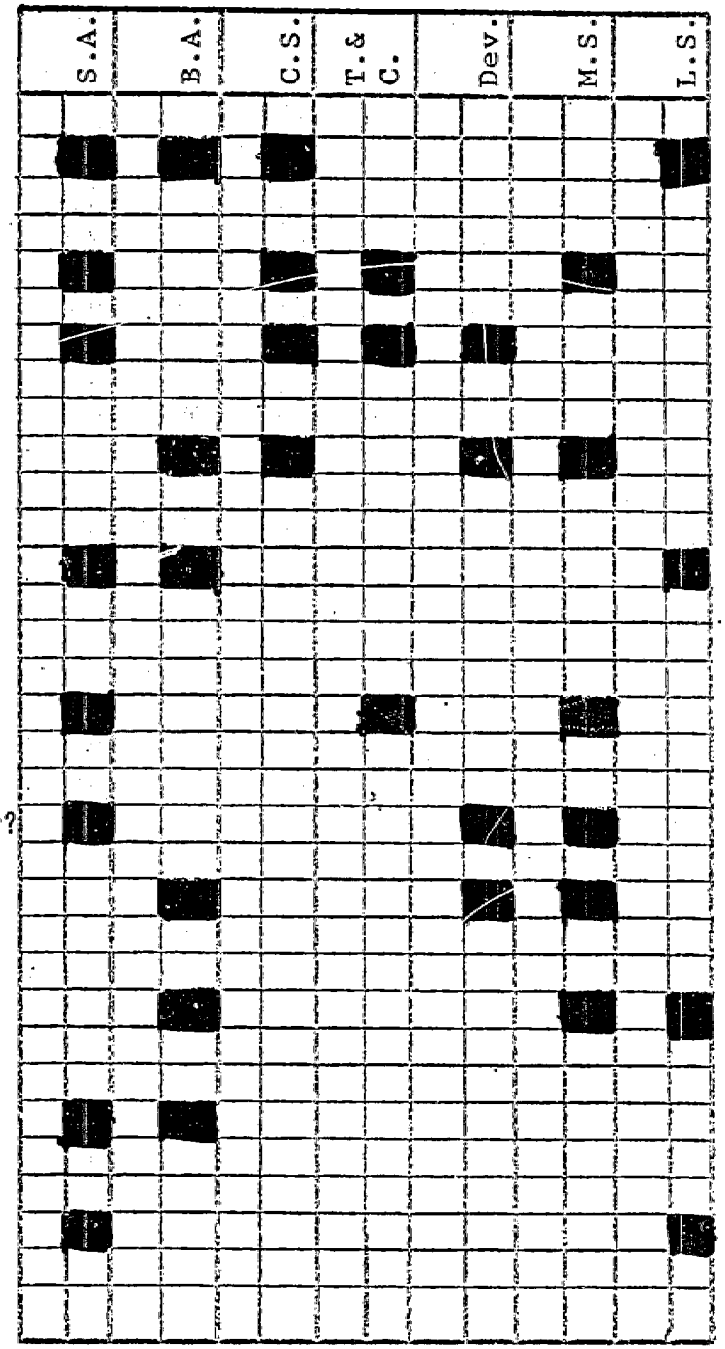
Listing of Top-Priority Items from Each User Group

Shown below are the top priority items of information on instructional systems for each of the seven user groups. A filled-in square denotes that the item of information was listed by the particular group noted at the top of the column. The reader is cautioned that the groups have been ordered differently in this listing to reflect more adequately their status with respect to their use of TAP services.

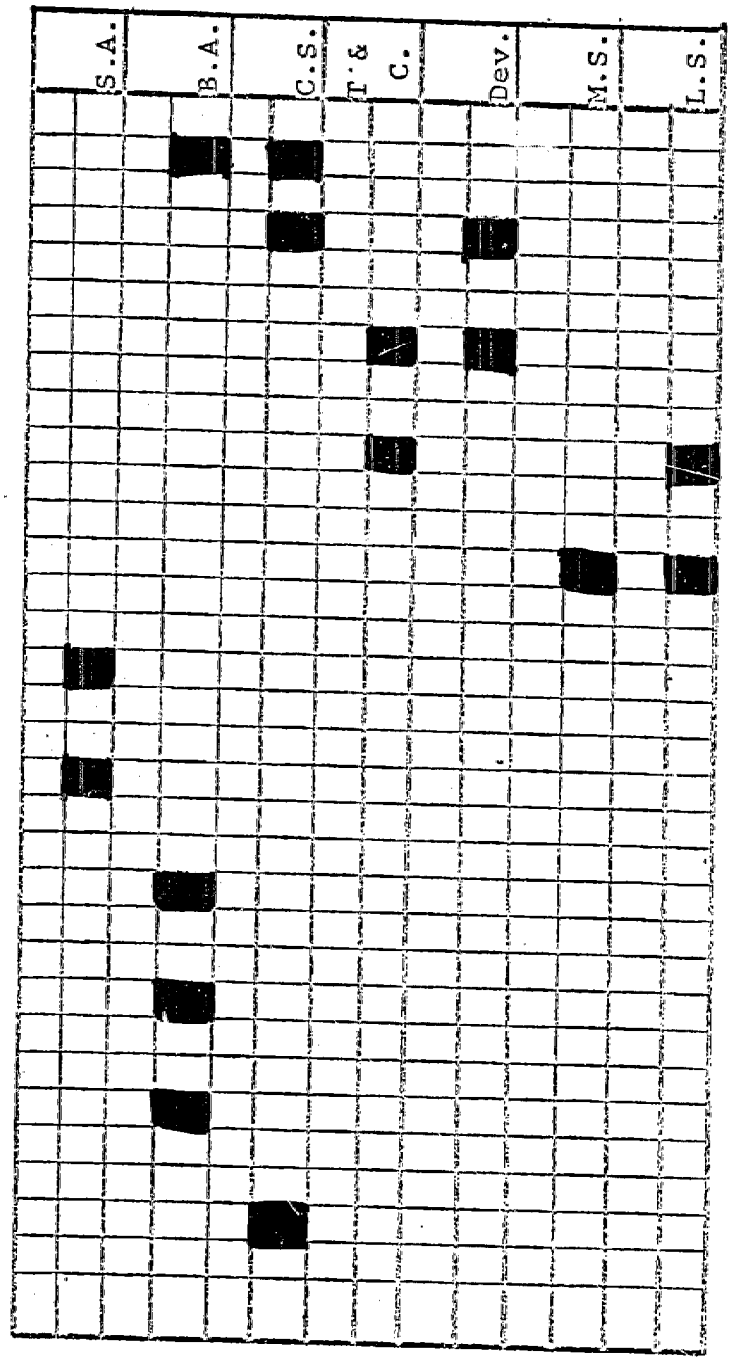


Question No.	Question
65	What are the specific instructional objectives of the system?
15	What are the general goals of instruction of the system?
75	What are the major concepts taught by the system?
80	How well does the instructional strategy match the objectives of instruction?
70	Is the content of the system credible and relevant?
22	What are the student reactions to the system?

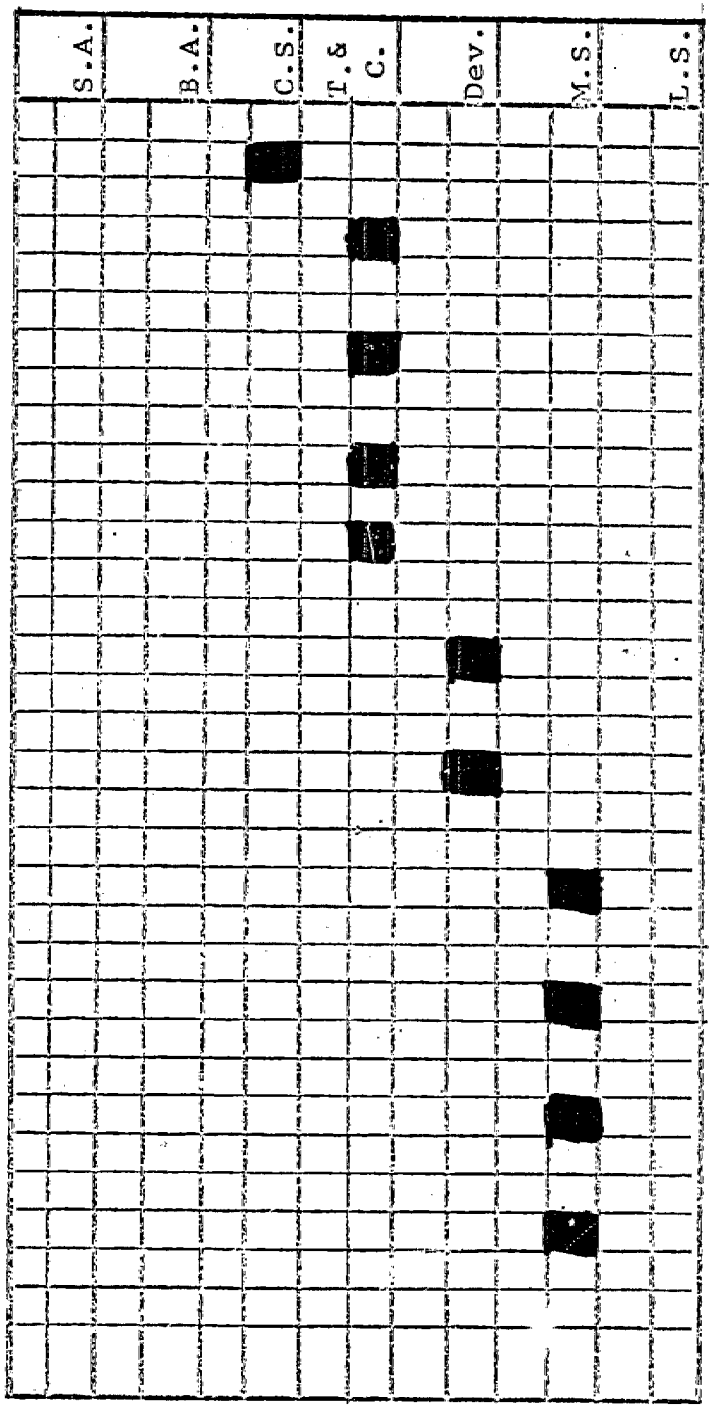
Question No.	Question
60	Is there a consistency of student performance when used time and again?
24	Can students proceed at their own pace?
77	What knowledges and skills are required of a teacher in order to use instructional systems?
23	What will students know, feel or be able to do after completing the system?
25	What amount of teacher in-service time is necessary for competence in the use of the system and its components?
89	Are there any ill-desired effects on students from using the system?
58	Does the student system user need to be a good reader?
4	Are intended outcomes of system related to students' interests?
100	How much time is spent by teachers in direct student contact?
13	How much teacher time is spent in evaluating student performance?
66	What is the cost per student per year to operate the system?



Question No.	Question
49	Are learning activities specified in the system?
3	What skills are required of teachers using the system?
72	For what intellectual level is the system intended?
37	Are there any problems in using the system's materials?
98	What procedures were used in the over-all evaluation of the system?
71	What measurement techniques are used to evaluate student progress?
26	What are the expressed attitudes of teachers who have used the system?
34	Is the system useful as it now exists in its present school setting?
42	What are the instructional strategies involved in the system?
63	Have school administrators' attitudes generally been favorable about the system?
10	How much direction is required of the teacher?



Question No.	Question
43	How does the student work with the materials?
33	Does system instruction tie in to pre- and post-system instruction?
62	Are any special people other than the teachers needed to operate the system?
20	Can parts of system be taught separately?
97	What amount of time does the teacher spend getting instructional material ready?
6	Can PARTS of the system be acquired or only the total system?
16	What is the primary way in which instruction takes place?
18	Is the system designed to facilitate supplemental teacher input?
19	Does the system provide for student evaluation/ feedback for revision of the system?
64	Do participants' goals or aspirations change using the system?
95	Does the system require a particular kind of encounter between the teacher and the student?



Question No.	Question
29	What kinds of facilities are required immediately and in the future to operate the system?
52	What is the cost to support the system from year to year for non-consumable items?
61	What does it cost to support the system from year to year in maintenance?
85	What is the rationale for the stated goals and objectives?
96	What equipment needs to be installed in order to be able to use the system?
99	What is the cost to support the system from year to year for consumable items?